

worm, which gets into the vesicle, and performs these revolutions while feeding on the young muscle, carrying it round with it, though itself invisible.

The young remain in the oviduct, which is like a honey-comb, till they arrive at the size fitting them to provide for themselves; and leave it in October and November; and when ready to leave it a canal is formed, through which they pass out,—an operation facilitated by the motion of the foot of the parent, which is partly surrounded by the oviduct.

On a newly discovered Genus of Serpentine Fishes. By I. Harwood, M.D. F.L.S. Professor of Natural History in the Royal Institution of Great Britain. Communicated by Daniel Moore, Esq. F.R.S. Read February 1, 1827. [*Phil. Trans.* 1827, p. 49.]

Dr. Harwood begins this paper by observing, that in no department of natural history have descriptions been more unsatisfactory than such as relate to certain productions of the ocean, which, from the immeasurable depths which conceal them, and absence of the circumstances best adapted to their multiplication, very rarely present themselves to our notice. It is to this rarity of opportunities for exact examination that we are to attribute the wonderful accounts of sea-monsters, which have from time to time appeared, such as the Kraken, the Sea Serpent, &c.

The author, after this preface, proceeds to describe a very extraordinary marine animal, taken by Captain Sawyer, of the ship *Harmony*, which was in pursuit of the bottle-nosed porpoise, in lat. 62° N., and 57° W. long. He observed a body floating on the water, which he at first took for an inflated seal-skin, but on a nearer approach it proved to be a living animal. Exhausted by unavailing efforts to gorge a fish, seven inches in circumference, it allowed itself to be taken, and was preserved by Captain Sawyer in rum. On a cursory view it might be taken for an extraordinary kind of sea-serpent, and this idea would be even supported by a closer examination of parts of its structure.

It offers points of discrepancy, however, from the several genera of animals nearer allied to it, so important as to entitle it to a distinct place in classification, especially as regards the jaws, which, with the exception of the apparent want of interarticular bones, are truly serpentine, and from the possession of an enormous elastic sac, which is seemingly a receptacle for air only. The first of these characters seeming to the author least liable to vary, he suggests the term *Ophiognathus* as applicable to the genus.

He then proceeds to give a technical zoological description of the genus, and to state the points in which it essentially differs from the genera nearer allied to it, after which he gives a more special description.

Its body is of a uniform purplish black, except the filamentous extremity of the tail, which is much lighter. Its total length 4 feet

6 inches. Its enlarged and extremely elastic pharynx commences with the enormous sac, or air-vessel, which extends about 20 inches from the snout. It is so delicate that it could not be fully inflated, but when partially so, measured about 9 inches in circumference, below its union with the tail, and its greater diameter, including the slender body of the animal, 4 inches.

At about an inch from its termination it is perforated by the rectum, and its tenuity rendered that and the other intestines easily traced. They appear to be sustained beneath the very imperfect ribs by a membranous expansion, not being affected in position by inflation of the sac.

The skin all over the body is particularly soft and shining. The spiracula are large, irregularly oval, and unprovided with external rays, and their edges partially conceal on each side three tufted branchiæ, at about $5\frac{1}{2}$ inches from the snout. The fins are all very small. In the pectoral ones is a peculiarity not found in other apodal genera, being chiefly composed of an adipose disc, which is terminated and nearly surrounded by a narrow radiated membrane, instead of the latter originating from the body immediately. The tail, after the termination of the dorsal fin, becomes a slender tape-like filament, nearly 20 inches longer; and above this point some minute filaments take their growth from it. The anal fin commences where the sac terminates, and ends 14 inches from the end of the tail.

The most curious parts of the animal are, however, the head and jaws. It has no tongue; the teeth are disposed in a single row above and below. The ossa palati are destitute of teeth, and the jaw-bones are so long, and their articulation so loose, as to be susceptible of distention beyond any other animal, not excepting the rattle-snake; and when fully distended they describe a large circle, and appear but the opening of an ample sac.

The author illustrates his description by three figures, and concludes by observing that the Ophiognathus is one of the most voracious of the inhabitants of the ocean. Its entire form would indicate great swiftness of motion, performed doubtless by the same sinuous inflections in water, which excite our admiration in serpents on land. In what manner its pouch is employed in its economy he does not attempt to determine, nor to decide whether it be capable of secreting the contained air, or whether water be allowed to enter it.

An Examination into the Structure of the Cells of the Human Lungs; with a view to ascertain the Office they perform in Respiration. By Sir Everard Home, Bart. V.P.R.S. Illustrated by Microscopical Drawings from the Pencil of F. Bauer, Esq. F.R.S. Read February 8, 1827. [Phil. Trans. 1827, p. 58.]

The author commences this paper by remarking that the subject of respiration has been hitherto regarded as belonging rather to chemistry than to anatomy; but that he finds reason to believe that process to be more simple than is imagined, and more within the